Rhein Tech Laboratories, Inc.
360 Herndon Parkway
Suite 1400
Herndon, VA 20170
http://www.rheintech.com

Client: Reconyx, Inc.
Model: SC950
Standard: FCC 15.231
FCC ID: ZON-HF-TRX
Report #:   2011095

Appendix G: Manual

Please see the following pages�[¦�c@^�ç[�æ˘æ�c@æ¦æ^�¦[çãæ^å�ãc@c@æ�¦[å˘&cÈ

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RECONYX™
SEE WHAT YOU'VE BEEN MISSING...

HYPERFIRE™
HIGH PERFORMANCE CAMERAS

Instruction Manual

Copyright: July 2010

Table of Contents

Camera Overview

Congratulations on purchasing a RECONYX™ camera. RECONYX™ has been the leader in digital wildlife cameras since 2002. Your HyperFire™ camera is a state-of-the-art digital camera, Passive Infrared (PIR) motion detector, and a night time infrared illuminator all contained in a secure, rugged, and weather-resistant case.

Whether you are using the camera for scouting deer or studying wildlife, you will find that using the HyperFire™ camera in conjunction with MapView™ Professional or BuckView™ Advanced software will be one of your most valuable tools in gathering and analyzing data.

Thank you for putting your trust in us!

Contents of this package:

- HyperFire™ Camera
- BuckView™ Advanced or MapView™ Professional software (CD-ROM)
- Adjustable bungee cord for mounting camera.
- This instruction manual.
- Moisture absorbing desiccant system (Professional cameras only)

Other things you will need:

- Secure Digital® (SD or SDHC) Memory Card
- 12 AA Batteries
    - ***NOTE***: *The HC600 & PC900 cameras must be run on either NiMH rechargeable batteries or Energizer® 1.5V AA Ultimate Lithium batteries.*
- A computer, television, digital picture frame or other device to view your pictures

Optional:

- Windows® PC to install BuckView™ or MapView™ software

NOTE: **If you have any questions or concerns relating to the operation or functionality of your camera, please contact our Technical Service Department by email at support@reconyx.com or by calling toll free 866-493-6064.**

HyperFire™ Specifications

	HC500	HC600	PC800	PC900
Illumination Range at night	Lo-glow Infrared up to 50 feet	No-glow Covert Infrared up to 50 feet	Lo-glow Infrared up to 70 feet	No-glow Covert Infrared up to 50 feet
Images	1080P HD or 3.1 MP color images by day; monochrome by night			
InstaOn™ Trigger Speed	1/5 second			
RapidFire™ NearVideo™	Up to 2 frames per second			
SD Card Capacity	Up to 32GB: (4GB = approx 10,000 pictures) **NOTE:** under normal use 2GB or 4GB cards are adequate.			
Software Included	BuckView™ Advanced		MapView™ Professional	
Moisture Absorbing Desiccant System	Available for purchase		Included	
Time-Lapse Surveillance	1, 5, 15, 30, or 60 minute intervals		Virtually any number of seconds, minutes, or hours	
Motion Sensor Scheduling	ON or OFF		15 minute increments within all 24 hour periods	
Start Delay	n/a		Up to 12 weeks	
Conformal Coated Electronics	n/a		Included	
Customization Options (additional charges may apply)	n/a		Wireless Trigger and IR Illumination Extender, External Power and Trigger Jacks, Focal Distance, Telephoto lens, Custom Motion Detector Lens, Custom Colors, *other modifications available*	
Warranty	1 year		2 years	

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BuckView™ ADVANCED

The HC500 and HC600 HyperFire™ Cameras include the new BuckView™ Advanced mapping and image management software with Google Maps® technology. This allows you to geographically organize and access your images, and helps you to pattern and understand animal movements and behaviors. In addition to camera locations, you can add food plots, tree stands and more. Our exclusive "quick tag" will allow you to tag specific bucks and add them to your "Hit List". BuckView™ Advanced also enables you to easily upload and share your RECONYX™ photos to Facebook® and Twitter®.

Refer to the *BuckView User Guide*, accessible within the software, for more information. BuckView™ requires a personal computer running Windows XP®, Windows Vista®, or Windows 7®.
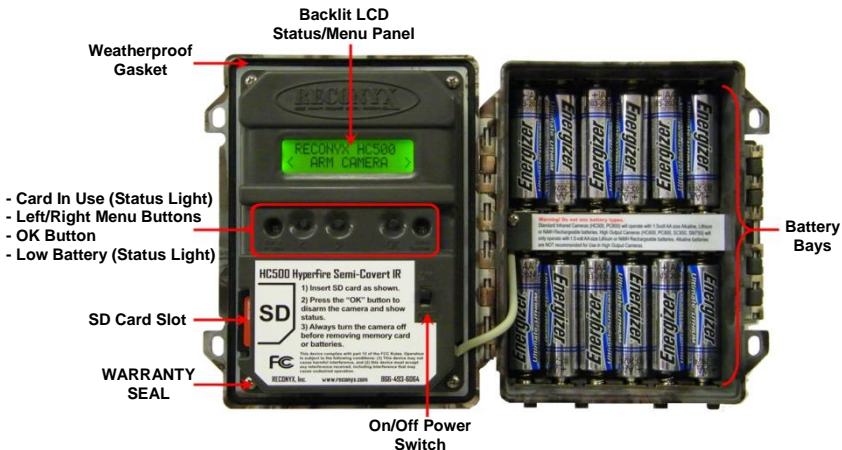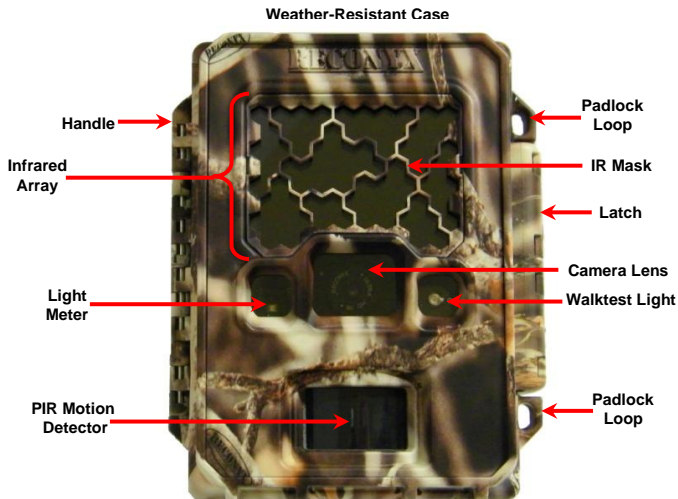
MapView™ Professional

The PC800 and PC900 HyperFire™ Cameras include the latest MapView™ Professional mapping and image management software with Google Maps® technology; allowing you to geographically organize and access your images, and helping you to pattern and understand animal movements and behaviors. In addition to camera locations, you can add nesting sites, bait stations, food sources and more. Our exclusive "power tagging" will allow you to easily define metadata and tag your images with data specific to your research project. Once your image data is specified you can easily export your data for further analysis using other software systems. In addition, the "RECONYX™ Professional Configuration software" allows advanced programming of your Professional Series camera, with a near infinite combination of settings available.

For more information, refer to the *MapView Professional User Guide*, accessible within the software. MapView™ Professional requires a personal computer running Windows XP®, Windows Vista®, or Windows 7®.

HyperFire™ Controls & Parts Diagram

Weather-Resistant Case

- Handle
- Padlock Loop
- Infrared Array
- IR Mask
- Latch
- Camera Lens
- Walktest Light
- Light Meter
- PIR Motion Detector
- Padlock Loop

Backlit LCD Status/Menu Panel

- Weatherproof Gasket

RECONYX HC500
< ARM CAMERA >

- Card In Use (Status Light)
- Left/Right Menu Buttons
- OK Button
- Low Battery (Status Light)

- Battery Bays

HC500 HyperFire Semi-Covert IR

1) Insert SD card as shown.
2) Press the "OK" button to disarm the camera and show status.
3) Always turn the camera off before removing memory card or batteries.

SD Card Slot

SD

WARRANTY SEAL

RECONYX, Inc. www.reconyx.com 866-493-6064

On/Off Power Switch

Batteries & Memory Cards

Accessing Batteries, Memory Card & Camera Controls

To install the batteries and memory card, your HyperFire™ camera is easily opened using the latch on the right side of the camera. Grasp behind the latch and flip it toward the front. The camera will open like a book, allowing access to the batteries, memory card and settings.

Step 1	Step 2	Step 3

TIP: *Each time you open your camera it's good practice to make sure the gasket is seated properly and no debris has gotten into the gasket. It is also a good idea to check that the windows on the front of your camera are clean.*

Also be sure the latch is fully seated when closing your camera to ensure a weather-tight seal.

Battery Specifications and Installation

Your RECONYX™ HyperFire™ camera runs on twelve AA-cell batteries. We highly recommend using either Energizer Ultimate Lithium batteries or high-quality NiMH Rechargeable batteries in your camera. Alkaline batteries do not provide as much power as Lithium or NiMH batteries and they are adversely affected by both hot and cold weather, so we do not recommend alkaline batteries.

NiMH will run at temperatures down to -20°F or colder. Lithium batteries will run to -40°F.

Alkaline batteries may be used in the HC500 and PC800 camera models. However, they will not provide the performance that the Lithium or NiMH batteries do, in terms of nighttime consistency or number of pictures taken.

NOTE: We strongly advise that you not attempt to run alkaline batteries in the HC600 or PC900, as the performance will be very poor.

NOTE: Be sure to load batteries in the proper orientation (alternating positive/negative, six in each battery bay).

Warning! Do not mix battery types! Damage to the camera can result and your warranty will be voided if you mix battery types.

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Battery Performance

Because camera settings, animal activity, individual battery performance and temperature all vary, there is no way to precisely predict a camera's run time, the total number of images that can be taken, or the temperature at which the camera will operate on any given set of batteries. Therefore the following table shows *approximate values* to be used as a guide in determining what type of batteries will best suit your needs.

NOTE: The values in the chart below were based on tests using 12 batteries; taking 50% daytime photos and 50% nighttime photos at 70ºF.

Battery Type	Operating Temperature	Number of Images		
		PC900 & HC600	PC800	HC500
AA Energizer Ultimate Lithium (1.5V)	-40º F (-40ºC) and above	30,000 to 40,000	40,000 to 50,000	40,000 to 50,000
AA Rechargeable Nickel-Metal Hydride (1.2V, 2600MaH)	-20º F (-29ºC) and above	* 20,000 to 30,000	* 20,000 to 30,000	* 20,000 to 30,000
AA Alkaline (1.5V) **(HC500, PC800 Only!)**	20º F (-7ºC) and above	**n/a**	* 20,000 to 30,000	* 20,000 to 30,000

* High temperatures can reduce run time with Alkaline and NiMH batteries by 50% or more.

TIP: You can purchase 1.5V Lithium batteries as well as RECONYX™ certified NiMH rechargeable batteries and chargers at www.reconyx.com.

Your camera will display the status of multiple battery types; be sure that the display is showing the same type of battery that you are using. You can change the battery type in the main menu, including Lithium (LITH), Nickel-Metal Hydride (NIMH), or Alkaline (ALK).

NOTE: The option to use alkaline batteries is only available on PC800 and HC500 camera models. Alkaline batteries are NOT to be used with the covert (PC900, HC600) cameras.

Secure Digital® (SD or SDHC) Card Specifications

A Secure Digital (SD/SDHC) card is used to store the pictures your camera captures. These images may be transferred to your computer using standard image viewing software or RECONYX™ MapView™ or BuckView™ mapping and image management software.

TIP: Many digital cameras, GPS units, and cell phones can be used to view images taken by your HyperFire™ camera. No need to purchase a special purpose viewer!

Inserting and Removing the memory card

Make sure the orientation is correct and that the card is aligned properly. Push gently on the memory card as shown below until it clicks into place.

Warning: Inserting the memory card upside down or backwards could damage the camera or the memory card. **Damage resulting from inserting the card incorrectly is not covered under warranty.**

To remove memory cards:

1. Press <OK> to disarm the camera (the battery status and number of pictures taken since last armed will be displayed on the LCD).
2. Switch the power <u>OFF</u>.
3. Press and release the card to partially eject the memory card.
4. The card can then be removed by grasping it with your fingers.

<u>*NOTE*</u>**:** Always disarm the camera (by pressing OK) and switch the power off before removing or inserting the memory card.

Memory Card - File System Requirements

Secure Digital cards have various speeds and capacities. Larger capacity cards are capable of storing more images. Your HyperFire™ camera can accept cards up to 32GB, but most users will find 2GB and 4GB cards to be more than adequate for normal use.

*NOTE***:** A 4GB memory card will store approximately 10,000 images.

Cards with higher speed ratings are capable of reading and writing images faster. This is advantageous when taking RapidFire™ NearVideo™ sequences of images.

Troubleshooting your memory card

If you have a memory card that does not seem to work, or you used the card in another device, you may have to re-format your memory card. This can be done with the included BuckView™/MapView™ software under the "Tools" menu item or with any Windows® Operating System.

Windows® – Steps to format memory card

Step 1: Insert your memory card into your computer's card reader.
Step 2: Click *"Start -> My Computer"*. You should see your memory card under the list of available drives. Be sure to check its contents first to make sure that you have the right drive.
Step 3: Right-click on the drive and choose *'Format'*.
Step 4: Under *"File system"* select the *"FAT32"* option then click on *'Start'*.
Step 5: Once the process is completed, take the memory card out and insert it into your Camera.

TIP: We recommend that you purchase two memory cards per camera so that you can swap cards in the field.

You can purchase RECONYX™ certified memory cards at www.reconyx.com

Setup & Programming

With the SD card inserted in the camera, turn your camera on using the **On/Off** switch.

NOTE: If this is the first time you've used your camera, it will automatically display the **Date/Time** setup change option, beginning with **Enter Year**.

Press the **<<** and **>>** buttons to scroll through settings for each step (year, month, day, hour, minute, temperature type and battery type); pressing the **OK** button after each step is entered correctly.

TIP: After the initial setup options are set, your camera is ready to take pictures. All you need to do is make sure your camera has a card and batteries installed, mount it to a tree, turn it on, close it up, and walk away. The camera will automatically arm and start taking pictures (with default settings) in two minutes.

Default Settings

Your RECONYX™ HyperFire™ camera comes pre-programmed with factory default settings. By default the camera will take 3 pictures per trigger with a 1 second pause between pictures and no delay between triggers.

If you wish to change your camera's settings you can do so easily in the field at any time. Changes are easily made using the control buttons and the LCD display. Once you make selections, they are retained by the camera – even when the camera is off and the batteries are removed – so that you don't need to make selections again unless you want to change something.

NOTE: Throughout the manual, default camera settings are shown in **RED CAPITAL** letters.

NOTE: Many additional features are available on the Professional cameras. These are set using the Configuration software that is included with Professional cameras. See the Configuration software help file in the software for more information.

HYPERFIRE™ Programming Menu

Your camera includes three major levels of options:

>   **Level 1: Main** menu
>
>   **Level 2: QuickSet** options
>
>   **Level 3: Advanced** settings

The programming menus are set up so that the most commonly used items are at the top level. Other camera settings that are not as frequently accessed do not show up every time you are setting up or moving your camera.

NOTE: As with the date and time, you can move through and select any of the menu options by pressing the **<<** and **>>** buttons to scroll, and the **OK** button when the menu or option you want to select is displayed.

TIP: Use the "Programming Diagram" on the next page for a better understanding of how the options are accessed on your HyperFire™ camera.

The backlit LCD includes two lines of information. The top line displays the menu, option, or setting you are currently accessing; after you make a selection, it may also display additional information. The bottom line displays the available options/settings. Selections you can choose from are always displayed between < > brackets on the bottom line.

You can change your camera settings any time you like, either prior to using the camera, or in the field. Likewise, you can switch memory cards as needed, and check the remaining space on your memory card as well as your remaining battery power.

NOTE: The camera will remember the settings even when shut off, so you do not need to reconfigure the camera unless you want to change its behavior.

HYPERFIRE™ Programming Diagram

LEGEND

· · · · · OK BUTTON

→ ARROW BUTTONS

RED = Default Setting

ON/OFF

ARM CAMERA → WALKTEST → ERASE CARD → CHECK STATUS → CHANGE SETUP → BATTERY TYPE → CAMERA INFO

CHANGE SETUP → MAIN MENU

NORMAL TRAIL ↔ AGGRESSIVE SCRAPE ↔ CONSERVATIVE FEEDER ↔ ADVANCED ↔ MAIN MENU

ADVANCED submenu: TRIGGER ↔ TIME LAPSE ↔ RESOLUTION ↔ NIGHT MODE ↔ DATE/TIME/TEMP ↔ CODELOC ↔ USER LABEL ↔ USE DEFAULTS ↔ MAIN MENU

TRIGGER: MOTION SENSOR (**on**, off) → SENSITIVITY (Low, Low/Med, Med, Med/High, **High**) → PICS PER TRIGGER (1, 2, **3**, 5, 10) → PICTURE INTERVAL (RapidFire, **1s**, 3s, 5s, 10s) → QUIET PERIOD (**no**, 15s, 30s, 1m, 3m, 5m) → FINISHED (ok)

TIME LAPSE: AM PERIOD (**off**, on) → PM PERIOD (**off**, on) → FINISHED (ok)

RESOLUTION: HC500, HC600 (**1080p**, 3.1MP) / PC800, PC900 (1080p, **3.1MP**) → FINISHED (ok)

NIGHT MODE: (**Balanced**, High Quality, Fast Shutter, Max Range) → ILLUMINATOR (**On**, Off) → FINISHED (ok)

DATE/TIME/TEMP: YEAR (####) → MONTH (Jan-Dec) → DAY (1-31) → HOUR (1-12 AM/PM) → MINUTE (00-59) → TEMPERATURE (**Fahrenheit**, Celsius) → FINISHED (ok)

CODELOC: (Add, Change, Remove, Main Menu)

USER LABEL: (Add, View, Change, Clear, Main Menu)

USE DEFAULTS: (Undo Changes, Main Menu)

Level 1: Main Menu Items

NOTE: Main Menu Items are shown in **Yellow** on the Programming Diagram (Page 13).

Arm Camera – When you select this option, your camera arms in ten seconds, unless you cancel it before the countdown is complete by pressing the "OK" button.

WalkTest – When you select this option, your camera flashes an indicator light so that you can test its aim by walking in front of it. The WalkTest mode shows you exactly where the camera's active motion detection zones are located. The tilt of the camera is critical, as slight changes are magnified at greater distances from the camera.

TIP: If left in WalkTest mode, the camera will automatically arm itself after 2 minutes with no motion events. This allows you to set the camera up, check its aim using WalkTest, and then just walk away.

Erase Card – When you select this option, your camera wipes your entire memory card clean, removing all images and other information from the card. You should *not* select **Erase Card** unless you are absolutely certain you want to remove everything from the card.

Check Status – When you select this option, your camera displays the number of pictures it has taken, the amount of space used on your memory card, and the amount of battery power remaining.

NOTE: The battery status shows the level for different types of batteries. If you change battery types be sure to change the "Battery Type" setting.

Change Setup – Allows you to change the way your camera functions.

Battery Type – Allows you to select what type of batteries you are using to accurately display the amount of power remaining.

Camera Info – When you select this option, your camera displays its firmware version number (V) and serial number (S). You may need this information when contacting RECONYX™ with questions about your camera.

NOTE: Professional Series cameras have many additional settings that can be programmed using the Configuration Software on your PC, included with MapView™ Professional Software (see additional notes below).

Level 2: Quickset Options

When Change Setup is selected the QuickSet options are displayed (**NORMAL/TRAIL**, Aggressive/Scrape, Conservative/Feeder, and Advanced). This allows you to quickly select pre-programmed settings that are optimized for particular situations. Selecting "Advanced" takes you to the settings listed below.

Professional Series	Outdoor Series	Pictures per Trigger	Picture Interval	Quiet Period
NORMAL	**TRAIL**	3 pictures	1 second	None
Aggressive	**Scrape**	5 pictures	RapidFire™	None
Conservative	**Feeder**	3 pictures	5 seconds	15 secs

Level 3: Advanced Settings

Trigger – Turn your camera's motion sensor on or off, select the sensitivity level of the PIR motion detector, set how many photos you want your camera to take per trigger, the interval between pictures, and the quiet period *(the time period after a trigger during which the camera will not respond to motion events).*

1. **Motion Sensor** – **ON**, off

2. **Sensitivity** - low, low/medium, medium, medium/high, **HIGH**.

3. **Pictures Per Trigger** – 1, 2, **3**, 5, or 10

4. **Picture Interval** – RapidFire, **1 SEC**, 3 sec, 5 sec, or 10 sec

5. **Quiet Period** – **NO DELAY**, 15 sec, 30 sec, 1 min, 3 min or 5 min

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Time Lapse – To control your camera's time lapse photography, select the starting and ending times, and the interval between pictures taken.

1. **AM Period** – on, **OFF**
2. **PM Period** – on, **OFF**
3. **Time Lapse starting and ending times** – one hour increments
4. **Picture Interval** – 1min, 5min, 15min, 30min, 1 hour

Resolution – Set image size to **1080p** or 3.1MP. (Professional cameras default to 3.1MP).

> *TIP: The 1080p setting is ideal for viewing images on widescreen monitors, or HD television sets.*

Night Mode - Adjust the nighttime exposure.

> *NOTE***:** These settings will NOT affect daytime images.

- **BALANCED** - best combination to balance image quality, shutter speed and flash range
- High Quality - higher quality images, reduced flash range
- Fast Shutter - reduced motion blur, reduced flash range
- Max Range – increased range, reduced image quality

Date/Time/Temp – Set date, time and temp. (**FAHRENHEIT**, Celsius).

CodeLoc™ – Use CodeLoc to add a four-digit security code to your camera to prevent unauthorized use of your camera in the event of tampering or theft. You can also change or remove an existing code.

TIP: Write your four-digit CodeLoc code in the space available on the last page of this manual.

User Label – Add a label (up to 16 characters) that will be included with all photos taken by your camera. You can also view, change, or clear an existing label.

Use Defaults – Remove any changes you've made to your camera's settings and restore the factory default settings (shown above in **RED CAPITAL** letters).

Main Menu – Go back to the **Main** menu.

Programming Professional Series Camera Traps

All of the settings detailed above are available on your Professional Series Camera Trap. In addition, there are many more set-up options available for Professional Series cameras by using the Configuration Software.

The Configuration Software saves your specified settings to the memory card. When you insert the memory card into the camera and then power it ON, the camera will automatically program itself with your specified settings.

The camera will display "**SAVED CONFIG**" after the settings have been successfully saved. The file is then erased from the card and is ready to operate with the new settings.

NOTE: The camera will remember these settings even when shut off, so you do not need to reconfigure the camera unless you want to change its behavior.

If you have configured your camera from your PC and you go into the Change Setup option using the camera's menu, it will prompt you with "**USING CONFIG**" – your options will be **<GO BACK>** or **<CONTINUE>**. If you continue, the settings previously set from the CONFIG software will be overwritten with the settings you select on the camera.

NOTE: Your new MapView™ software is fully compatible with older RECONYX™ RapidFire™ Professional and Silent Image series cameras.

You can program old and new cameras as well as import, view, tag, and export image data from all RECONYX™ brand cameras.

TIP: Setting the date and time on the new HyperFire™ Professional cameras is easier to do right on the camera than it is through the Configuration software.

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Mounting Your Camera

Your RECONYX™ HyperFire™ camera can be mounted to a RECONYX™ VersaMount™, ThunderBolt™, or camera tripod by utilizing the threaded insert on the back of the camera housing.

The camera may also be mounted to a tree by using the included adjustable bungee cord (shown below). Simply thread the end without the loop through the "Lock Tunnel" on the camera and then install the included adjustable bungee hook to the length needed and fasten to the tree.

Mounting Camera with Adjustable Bungee Cord (included)

We recommend that you mount your camera about chest height and angle it slightly downward (using a camera mount or stick if needed). This is optimal for detecting animals in the field of view of the camera as well as for accessing the camera's card, batteries, and controls.

> ***NOTE***: It is highly recommended that you use a theft deterrent device such as a security box and/or a Master Python Lock™ to help secure your camera against possible theft when it is in the field.

You can purchase HyperFire™ compatible mounts, theft deterrent cables, locks and security enclosures at www.reconyx.com

TIP: If you are concerned about the slight red glow of the illuminator on the lo-glow camera models (HC500 or PC800) spooking animals, you can mount the camera a bit higher and angle it down. Most animals do not often look up and therefore are less likely to notice the camera if it's mounted above eye level.

Locking & Securing Your Camera

There are a number of options to securely mount your camera.

1) Use a Master Python Lock™ by threading it through the Lock Tunnel in the camera to secure it to a tree or another object. This will prevent the camera from being easily removed.

2) If you would like to secure the camera from being opened, you can use a small padlock in the "Padlock Loop" near the latch. For increased security, there are two different security enclosures available: The standard "HyperFire™ Security Enclosure" made from 16 gauge steel; or the "Heavy Duty HyperFire™ Security Enclosure", made from 1/8" steel.

**NOTE**: Both security enclosures feature a weather-resistant powder coated finish, and are able to be lag bolted to an object and/or can be used with a Python Lock™ through the enclosure as well as the camera.

(Accessories not included)

HyperFire™ Security Enclosure   Master Python Lock™ w/padlock

TIP: RECONYX™ sells an array of accessories for mounting, securing and disguising your camera to protect your investment; including Heavy Duty Security Enclosures, Padlocks, Python Locks™ and more.

Go to www.reconyx.com for more information on accessories.

TIP: Be sure to enable the Codeloc™ feature on your camera for additional security.

Aiming Your Camera

PIR Motion Detector

The Passive Infrared Motion Detector on your HyperFire™ camera is precisely aligned with the camera lens to give you the best chance of capturing subjects that come into the field of view of the camera, while not capturing pictures of anything that is not in the view of the camera.

The motion detector can detect movement up to 100 feet (30.5m) away. However, the detection range is dependent on the temperature of the source in relation to the ambient air temperature.

The HyperFire™ Motion Detector consists of two horizontal detection bands, as well as six different zones within each detection band.

NOTE: Detection zones differ between 1080p images (below) and 3.1 MP images (right)

For the camera to take a picture two things need to happen:

1) An object (typically an animal) with a temperature different from the background temperature must be present within one of the detection bands.
   (i.e. something warmer or colder than the ambient temperature).
2) That object (i.e. something with a different temperature) must be moving into or out of at least one of the six motion detection zones.

NOTE: In the photo above the deer to the far right and the deer in the middle would each trigger the camera. The deer to the far left would not trigger the camera since it is above the top detection band.

Using the "Walktest" Mode

Learning to use the Walktest mode is critical to being as successful as possible with your RECONYX™ camera. The Walktest mode allows you to precisely determine your camera's active motion detection zones – ensuring your camera is aimed exactly where you want to capture animal activity.

PIR MOTION DETECTOR COVERAGE AREA

1) Secure the camera to a tree or other object aiming the camera toward where you want it to capture pictures.

2) Put camera in "Walktest" mode, and close the camera.

3) Walk in front of the camera where you expect to capture pictures. Every time the red walktest light blinks it indicates that a motion event is taking place. If the walktest light does not blink where you expect it to, adjust the aim or location of the camera.

4) If possible, set up the camera so that no large trees or objects are in the main field of view of the camera, as they can adversely affect motion detection as well as night time flash range.

NOTE: All RECONYX™ cameras will self-arm from the "Walktest" mode after a two minute period during which it does not detect any motion events.

TIP: When setting the camera up it's best to position the camera so it is not in the normal line of sight for the subject you are trying to capture photos of so it is not visibly detected. If possible set the camera up behind or perpendicular to the normal direction of travel.

Be sure to use the "Walktest" mode to be sure the camera is aimed correctly.

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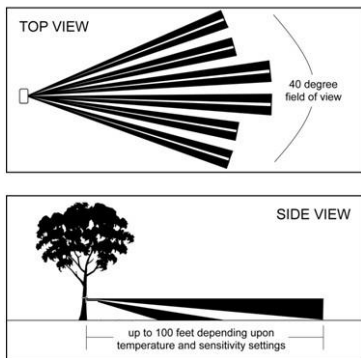
Image Data Information

Your RECONYX™ HyperFire™ camera stores Image Data along with every picture it takes. Some of this information is displayed in Image Data bands above and below the image.
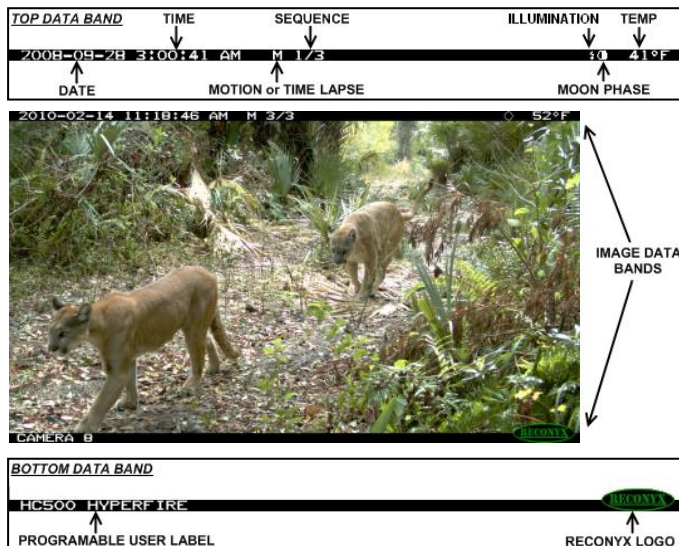
- An **M** or **T** in the top data band indicates a "motion" or "time-lapse" event.

- "**1/3**" indicates the first in a sequence of three pictures for that event.

- Moon Phases displayed include: ⚫ (new moon), 🌑 (waxing crescent), 🌓 (first quarter), 🌔 (waxing gibbous), ⚪ (full moon), 🌖 (waning gibbous), 🌗 (last quarter), and 🌘 (waning crescent).

- An "Illumination" ⚡ indicator appears in the Image Data bands, when the infrared illuminator is used.

TIP: There is additional image data accessible using either MapView™ or BuckView™; including camera serial number, firmware version, battery voltage, and much more.

Additional Camera Options

IR Mask

If you need to clean the IR Array window, the IR Mask™ is easily removed by carefully inserting a small screw driver in the left or right side to pry it out.

Warning: Be very careful not to scratch the IR Array window!

Step 1	Step 2	Step 3
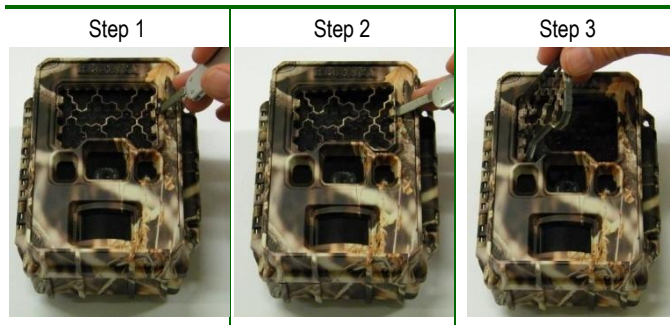
The windows covering the IR Array, lens, walktest indicator and light meter, may all be cleaned with glass cleaner or water using a soft non-abrasive cloth.

To replace the IR Mask™, carefully line up one side of the IR Mask™ with the IR Array window. Then gently push on both sides until the IR Mask™ is completely seated against the window, and snaps into both sides.

Step 1	Step 2	Step 3
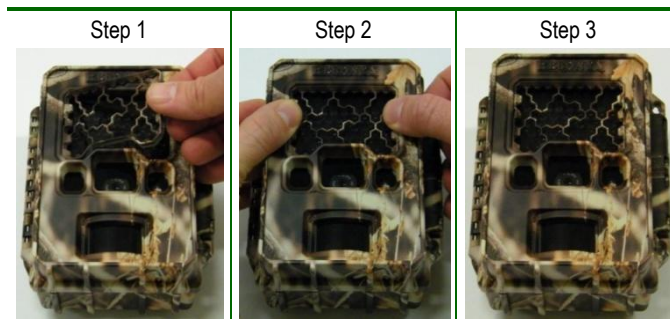
High Humidity Environments

The HyperFire™ Professional Series camera traps are best suited to high humidity and extreme environments since the electronics are conformal coated for environmental protection.

We also recommend using the moisture absorbing "desiccant system" included with your professional camera. The desiccant system is designed to absorb moisture that may get trapped inside the camera when the housing is opened in humid conditions. It is not intended to absorb water if the camera is opened in a rain storm, for instance.

The desiccant system can be used in any HyperFire™ camera. Additional desiccant pellets are available for purchase at www.reconyx.com

Professional Series Hardware Options

In addition to the many configuration settings available, your HyperFire™ Professional Series camera can be customized for optimal use to capture images where most other camera traps fail.

There are many custom hardware options available to suit your particular study or need (additional costs may be associated).

Hardware options include but are not limited to…

- External Power Connectors
- Wireless Remote Triggers
- Wireless Remote Infrared Illumination Extenders
- Custom Focal Lengths
- Telephoto Lenses
- Custom Motion Detector Lenses
- Custom Colors, and more…

Troubleshooting

For answers to questions about your RECONYX™ HyperFire™ camera that you cannot find in this *Instruction Manual*, please check the RECONYX™ web site (www.reconyx.com).

Firmware Updates

You should also periodically check the RECONYX™ web site for firmware updates for your camera. We periodically release firmware updates with new features and/or performance enhancements. Updating firmware on the HyperFire Series cameras takes just a few seconds, and is well worth the effort to ensure your camera is performing at the highest level possible.

Limited Nighttime Range

If your nighttime range is less than expected, check to be sure your batteries are new or fully charged. You can also change your camera's night mode image setting to Max Range. Our specified night range values are based on the Max Range setting. If using Max Range doesn't resolve the problem, then try running either NiMH rechargeable batteries, or Energizer 1.5V AA Ultimate Lithium batteries. Alkaline batteries cannot deliver enough amperage to power the illuminator consistently at night.

The physical camera setup is also important in getting good nighttime images. If you aim the camera out over an open field where there is nothing within range to reflect the Infrared energy back toward the camera, the images will appear very dark (like shining a flashlight into outer space). The best nighttime images will be captured when you have a backdrop of some sort that will reflect energy back toward the camera (e.g. trees, tall grass, fence, building, hillside, etc).

Focus Problems

If your images appear cloudy or out of focus, first consider whether there was snow or frost on the camera windows; you may wish to check your camera after a fresh snowfall to be sure the windows are not covered with snow. Next, check the windows for dirt and water spots, and gently clean them with a clean soft cloth and glass cleaner or water. Image clarity can also be adversely affected by very high temperatures, so it is a good idea to mount your camera where it will not be getting direct sunlight during the heat of the day.

False Triggers

If you seem to be getting false triggers (i.e. the camera is taking pictures of nothing); first put your camera back to the default settings and try your camera again. This will ensure that you are running with known settings – with the motion detector ON at HIGH sensitivity and with Time-Lapse turned OFF.

If after going back to the default settings, and you still seem to be getting false triggers, check the physical setup of your camera. The sun should not be shining directly on the face of the camera, and the camera's field of view should be cleared of as much vegetation as possible. False triggers most often occur on sunny, breezy days. Vegetation will soak up the sun's energy and it will become warmer than the ambient air temperature. Then, when the wind moves the vegetation, the camera sees this and cannot distinguish it from a warm-blooded animal moving in the scene. For this reason, careful placement and setup of your camera helps prevent false triggers.

Only as a LAST resort should you turn down your camera's motion sensitivity; this reduces your ability to detect movement of warm-blooded animals, especially during the summer.

Camera Not Triggering on Animals

First put the camera back to Default settings and try your camera again. This will ensure that you are running with known settings – it will set the motion detector ON at HIGH sensitivity. This is important, especially in the warmer months, because as the background temperature approaches the temperature of the animals, the strength of the signal decreases and the range goes down accordingly.

If you are still having trouble, please refer to the *"Mounting and Aiming Your Camera"* section for detailed information, as well as using the walktest mode. Keep in mind that most animals are not 6 feet (2 meters) tall, so when you use the walktest mode, do not just walk by the camera in a full upright stance. The camera may be triggering on your upper torso or head and not on your legs (where most animals are likely to be). There is an inactive zone that you need to be aware of so that you don't aim the inactive zone precisely on a trail – if you do, you will not pick up animal activity on the trail.

It is important to keep in mind that there are other factors that can also affect the ability of your camera to detect motion. Wind can have a detrimental effect. Body heat from an animal can be quickly dispersed away from the

---

animal on a breezy day, making it more difficult for the camera to detect the animal. Also movement directly toward and away from the camera is less likely to trigger the camera than side-to-side movement. And, finally, if an animal is moving very slowly, it will sometimes not produce a strong enough signal within the sensor to trigger the camera.

Memory Card Problems

If your camera won't start up properly and/or displays a "card error", first check to be sure your card is not "Locked". On most SD cards there is a switch on the side of the card. If the card is locked, you will not be able to save any photos.

If you have other issues, you may have to try a different brand of memory card. We have found that some of the cheap memory cards are very slow and do not always run well (even if they are advertised as fast). RECONYX™ certified memory cards are available at www.reconyx.com
***NOTE*:** All memory cards should be formatted with the FAT32 File System for use in your HyperFire™ camera. (See "Memory Card File System Requirements" for further information.)

Cold Weather Problems

If your camera shuts down in the cold, it may be too cold for the batteries. Refer to "Battery Specifications" for recommended battery types.

Extreme cold weather may have an adverse affect on the LCD display; this does not inhibit the camera's ability to function.

Battery Life Less than Expected

Alkaline and NiMH batteries have decreased life in hot weather. They will run the camera, but they will have decreased run time. It is not unusual to see battery life drop off 50% or more when daytime temperatures are near 90˚ Fahrenheit or higher. This will not damage your NiMH batteries; their charge just runs down faster.
If you notice that when your batteries run down, the nighttime illumination decreases. You should change your batteries sooner, or switch to Lithium or NiMH batteries.

Other Questions?

If you have read this manual and checked our web site, and you still need assistance, please contact our Technical Support Department at 866-493-6064 or e-mail at support@reconyx.com.

Warranty, FCC, and Safety Information

RECONYX™ Limited Hardware Warranty

- HC500, HC600 - Outdoor Series cameras have a **one (1) year warranty**.

- PC800, PC900 - Professional Series cameras have a **two (2) year warranty**.

If during this period, through normal use, a hardware product becomes defective due to defects in materials or workmanship, RECONYX™ will either repair or replace the product. This warranty is void if a product failure results from accident, abuse, improper use by Buyer, disassembly, or unauthorized maintenance and repair.

<u>NOTE</u>: **There is a warranty seal on your camera; if this seal is broken or tampered with, the warranty is void.**

RECONYX™ Limited Software Warranty

Software products are licensed to Buyer under the terms of the applicable RECONYX™ software license (contained within installation programs). If Buyer wishes to review the software license agreement before purchasing products from RECONYX™, a copy of the software license may be obtained by request.

Repair or Replacement

Buyer must obtain a Return Authorization (RA) number from RECONYX™ before returning any product(s) for repair or replacement. If RECONYX™ concludes that a returned product is not defective, Buyer will be notified, the product will be returned to Buyer at Buyer's expense, and Buyer may be charged for examination and testing of the product.

This limited warranty is the sole warranty for hardware and software products offered by RECONYX™ and RECONYX™ shall not be liable for any amounts for said products except in compliance with this warranty.

FCC Certification

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Safety Precautions

Before using the camera, please ensure that you read and understand the following safety precautions. Always ensure that the camera is operated correctly.

The safety precautions noted in this guide are intended to instruct you in the safe and correct operation of the camera and its accessories to prevent injuries or damage to yourself, other persons, and equipment.

Preventing Malfunction

Avoid Strong Magnetic Fields

Never place the camera in close proximity to electric motors or other equipment generating strong electromagnetic fields. Exposure to strong magnetic fields may cause malfunctions or corrupt image data.

Avoid Condensation

Moving the camera rapidly between hot and cold temperatures may cause condensation (water droplets) to form on its external and internal surfaces. You can avoid this by placing the camera in an airtight, plastic bag and letting it adjust to temperature changes slowly before removing it from the bag.

If Condensation Forms Inside the Camera

Stop using the camera immediately if you detect condensation inside the camera. Continued use may damage the. Remove the memory card and batteries from the camera and wait until the moisture evaporates completely before resuming use.

Warnings

- Store this equipment out of the reach of children and infants.
- Do not allow water or other liquids to enter the interior of the camera. The interior has not been waterproofed. If the exterior comes into contact with liquids or salt air, wipe it dry with a soft, absorbent cloth. In the event that water or other foreign substances enter the interior, immediately turn the camera's power off and remove the camera batteries.
- Use of power sources not expressly recommended for this equipment may lead to overheating, fire, electrical shock, or other hazards.
- Do not short-circuit the battery terminals with metallic objects, such as key holders. It could lead to overheating, burns, and other injuries.
- Avoid using, placing, or storing the equipment in places subject to strong sunlight or high temperatures, such as the dashboard or trunk (boot) of a car. Exposure to intense sunlight and heat may cause the batteries to leak, overheat or explode, resulting in fire, burns or other injuries. High temperatures may also cause deformation of the casing.
- When using desiccant, the following precautions should be followed: Keep desiccant out of reach of children. Desiccant may cause eye or skin irritation; seek medical assistance for further treatment,
- Check your state/local laws concerning the use of this product.

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Your Information and Camera Warranty Registration

Record Your Information

After you have familiarized yourself with this instruction manual, your camera, and software, you should record some basic information here so that you don't lose it. It is also a good idea to keep your purchase receipt in case you would need warranty work done on your camera.

Date Purchased:	
Place of Purchase:	
Camera Model:	
Camera Serial #:	
CodeLoc™ Password:	
www.reconyx.com Username:	
www.reconyx.com Password:	

Register your Camera

Save A Stamp! Register Your HyperFire™ camera online today at **www.reconyx.com/register** or by sending in the information below to:

RECONYX, Inc.
3828 Creekside Lane
Holmen, WI 54636

RECONYX™ HyperFire™ Warranty Registration		
Name:		
Address:		
City:	**State:**	**Zip:**
Phone:	**Email:**	
Camera Model:		
Serial Number:		
Date Purchased:		
Retailer:		

Copyright & Trademark Information

HyperFire™ **Instruction Manual**   Copyright March 2010

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- Energizer® is a registered trademark of Energizer Corp.
- Windows XP®, Windows Vista® and Windows 7® are registered trademarks of Microsoft Corporation.
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Manual Version: 20100715v1

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RECONYX
SEE WHAT YOU'VE BEEN MISSING...

HYPERFIRE™

RTI350
REMOTE WIRELESS TRIGGER & ILLUMINATOR
INSTRUCTION MANUAL

Table of Contents

Copyright: October 2011

RTI350 Overview

Congratulations on purchasing a RECONYX™ RTI350 Wireless Remote Trigger and Illuminator. The HyperFire™ RTI350 is a state-of-the-art wireless Passive InfraRed (PIR) motion detector, and a night time InfraRed (IR) Iluminator that is enclosed in a secure, rugged, and weather-resistant case.

The RTI350 communicates wirelessly with a Remote Enabled Security or Professional series camera from RECONYX™ up to a range of 100ft.

The RTI350's motion sensor and illuminator can be used either as a supplement to or as a replacement for the camera's motion sensor and illuminator.

In the case where you are using it as a supplement to the camera you will need to be sure the front of the camera is not blocked, or at least the parts of the camera that you are using (i.e. illuminator and/or motion detector).

In the case where you want to use the Remote's illumination and motion sensing capabilities rather than the camera's, you should turn off these functions on the camera to save power and ensure you get the results you expect. In this case the Camera can then be hidden while exposing only the lens and the light sensor (to the left of the lens). The Remote will serve as the trigger and illuminator in this scenario.

Contents of this package:

- HyperFire™ RTI350 Wireless Trigger and Illuminator
- Adjustable bungee cord for mounting
- This instruction manual

Other things you will need:

- HyperFire™ Professional or Security Camera; enabled for use with the RTI350
- 12 AA Batteries

   NOTE: The RTI350 <u>must</u> be run on either NiMH rechargeable batteries or Energizer® 1.5V AA Ultimate Lithium batteries.

---

*NOTE***: If you have any questions or concerns relating to the operation or functionality of your device, please read the FAQs or contact our Technical Service Department through our website at www.reconyx.com or by calling toll free 866-493-6064.**

HyperFire™ RTI350 Controls & Parts Diagram

Front view labels:
- Handle
- Infrared Illuminator
- Fake Lens
- PIR Motion Detector
- Padlock Loop
- IR Mask
- Latch
- WalkTest Light
- Padlock Loop

Open view labels:
- Weatherproof Gasket
- Backlit LCD Status/Menu Panel
- Battery Bays
- In Use Light
- Left Menu Button
- Right Menu Button
- OK Button
- Low Battery Light
- PIR Sensitivity
- WARRANTY SEAL
- On/Off Power Switch
- Breathable Vent

LCD display:
ILLUM:ON   CH:10
TRG:ON   19%NIMH

Panel text:
RTI350 HyperFire

This device complies with part 15 of the FCC Rules.
Operation is subject to the following conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received,
including interference that may cause undesired
operation.

FCC ID: ZON-HF-RTI

RECONYX, Inc.   www.reconyx.com   866-493-6064

Remote Quick Setup

First Time Setup

The first time you turn on your RTI350, you will be asked to select what type of batteries you are using (NIMH or Lithium).

Once this option is selected the Remote is ready for use with the default settings.

Default settings on the Remote unit are:

- Illuminator: On
- Trigger: On
- Channel: 1

Default settings for a Camera that is Remote Enabled are:

- Illuminator (on camera): On
- Trigger (on camera): On
- Receiver: On
- Transmitter: On
- Channel: 1

NOTE:

- The default settings for both devices are set so that the remote unit is configured to be used as a supplement (in addition) to the Camera's capabilities.

- If you want to use the Remote as the only trigger and/or illuminator for the Camera, you should turn off the trigger and/or illuminator on the camera.

- If you deploy the camera without the RTI350, you should turn off the "receiver" and "transmitter" on the camera in order to conserve power.

The RTI350 will only function with a camera that has been Remote enabled.

You can tell if your camera is Remote enabled by looking for this sticker on the inside of your camera.

> **Enabled for use with RTI350**
> **FCC ID: ZON-HF-TRX**

Batteries & Controls

Accessing the Batteries & Controls

To install the batteries, your HyperFire™ RTI350 is easily opened using the latch on the right side of the device. Grasp behind the latch and flip it toward the front. The device will open like a book, allowing access to the batteries, memory card and settings.

Weatherproof Enclosure and Breathable Vent

Although the RTI350 comes in a weatherproof enclosure, there are a few things to know to maintain the remote.

- Each time you open your Remote it's good practice to make sure the main gasket is seated properly and no debris has gotten into the gasket channel. Also be sure the latch is fully seated when closing your Remote to ensure a weather-tight seal.

- There is also a breathable vent (pictured) underneath the latch of the remote. This vent allows the case to equalize the internal pressure with the outside environment while preventing moisture from entering the case.

  *NOTE***:** If the vent becomes damaged in any way, contact Reconyx for a replacement to prevent damage to your device.

Battery Specifications and Installation

The RTI350 runs on twelve AA-cell batteries. We highly recommend using either Energizer Ultimate Lithium batteries or high-quality NiMH Rechargeable batteries in both your Camera and Remote.

Alkaline batteries: do not provide as much power as Lithium or NiMH batteries and they are adversely affected by both hot and cold weather, so we do not recommend using them in your RTI350.

NiMH batteries: will run at temperatures down to 0°F. High temperatures can reduce run time of NiMH batteries by 50% or more.

Lithium batteries: will run well at high temperatures and down to -20°F.

> *NOTE***:** We strongly advise that you not attempt to run alkaline batteries in the RTI350, as the performance will be very poor.

> *NOTE:* Be sure to load batteries in the proper orientation (alternating positive/negative, six in each battery bay).

Warning! Do not mix battery types! Damage to the Remote can result and your warranty will be voided if you mix battery types.

The Remote will display the status of multiple battery types; be sure that the display is showing the same type of battery that you are using. You can change the battery type in the menu to either Lithium (LITH) or Nickel-Metal Hydride (NIMH).
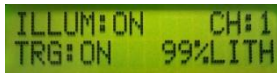
Battery Performance

Lithium batteries can last up to a year. However, because the Remote settings, camera settings, subject activity, individual battery performance and temperature all vary, there is no way to precisely predict the run time for any given set of batteries.

TIP: You can purchase 1.5V Lithium batteries as well as RECONYX™ certified NiMH rechargeable batteries and chargers at www.reconyx.com.

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Setup & Programming

Turn your Remote on using the **On/Off** switch.

Press the **<<** and **>>** buttons to scroll through settings, to select an option press the **OK** button.

> *NOTE:* If this is the first time you've used your Remote, it will automatically display the **Battery Type** setup change option. Once you select the correct battery type, your Remote is ready to use with the default settings.

TIP: When powered on, the Remote will display the current status; including Illuminator, Trigger, Channel and Battery Percentage.

```
ILLUM:ON      CH:1
TRG:ON     99%LITH
```
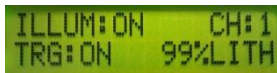
Default Settings

The RTI350 comes pre-programmed with factory default settings. By default the Illuminator and Trigger are turned <u>ON</u> and the channel is set to <u>1</u>.

If you wish to change your Remote's settings you can do so easily at any time. Changes are made using the control buttons and the LCD display. Once you make selections, they are retained by the Remote; even when powered off or when the batteries are removed, so that you don't need to make selections again unless you want to change something.

Motion Sensor Sensitivity Settings

Up = High
Center = Medium
Down = Low
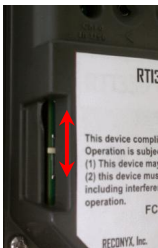
The motion sensor sensitivity settings may be adjusted to High/Medium/Low by moving the white switch on the bottom left side of the Remote.

> *NOTE:* It is highly recommended to leave the sensitivity setting on high, unless you are getting an unusually high number of false triggers.

HYPERFIRE™ RTI350 Programming Menu

You can move through and select any of the menu options by pressing the **<<** or **>>** buttons to scroll, and the **OK** button when the menu or option you want to select is displayed.

TIP: Use the "Programming Diagram" on the next page for a better understanding of how the options are accessed on your HyperFire™ RTI350.

The backlit LCD includes two lines of information. The top line displays the menu option or setting you are currently accessing; after you make a selection, it may also display additional information. The bottom line displays the available options or settings, and the selections you can choose from are always displayed between <> brackets on the bottom line.

You can change your Remote settings any time you like, either prior to using the Remote, or in the field. You can also check the current settings and the remaining battery power by selecting "Check Status".

*NOTE***:** The camera and Remote will remember the settings even when shut off, so you do not need to reconfigure the camera or Remote unless you want to change its behavior.

HYPERFIRE™ Camera Transceiver (TRX) Programming Menu

When your Camera is enabled for use with the RTI350, there will be additional settings available in the advanced settings to control how the camera interacts with the Remote.

These settings are accessible by selecting...

"CHANGE SETUP > ADVANCED > REMOTE SETUP"

Camera Receive - Allows the camera to receive trigger events from the Remote unit(s).

Camera Transmit - Allows the camera to send illumination signals to the Remote unit(s).

Camera Channel - Should be set to the same channel as the Remote unit(s) you want to use with the camera.

*NOTE***:** When the camera is triggered by the RTI350, the corresponding photo will have an "E" in the top data band to indicate "External Trigger"

`2011-09-26 10:35:33 PM  E 3/3                    ↕○    76°F`
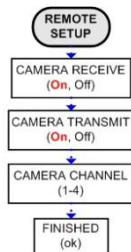
HYPERFIRE™ RTI350 Remote Programming Menu
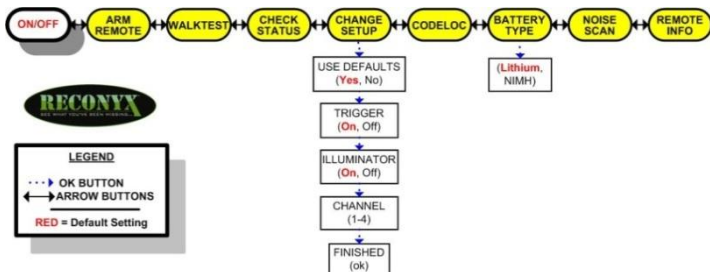
Menu Items

Arm Remote - When you select this option, your Remote will arm in ten seconds, unless you cancel it before the countdown is complete by pressing the "OK" button.

WalkTest - The WalkTest mode on the Remote works in conjunction with the WalkTest mode on the camera to allow you to set up, test, and verify your Camera and Remote unit(s). Additional details are included on the following pages.

Check Status - When you select this option, your Remote will display:

- the on/off status of the trigger and illuminator
- the active channel on the remote
- the amount of battery power remaining

```
ILLUM:ON      CH:1
TRG:ON    99%LITH
```

*NOTE***:** The battery status shows the level for different types of batteries. If you change battery type; be sure to change the "Battery Type" setting.

Change Setup - Allows you to use the default settings, and turn the trigger or illuminator on/off as well as select the channel.

CodeLoc™ - Allows you to add, change or remove a four-digit security code to prevent unauthorized use in the event of tampering or theft.

Battery Type - Allows you to select what type of batteries you are using to accurately display the amount of power remaining.

Noise Scan - Allows you to check for interference caused by other devices running at the same frequency. If you detect a high level of interference, you may experience less then optimal performance (i.e. some trigger and/or illuminator commands may be lost). Displays "Low", "Medium", or "High" and updates every 2 seconds.

Remote Info - Displays the firmware version number. You may need this information when contacting RECONYX™ with questions about your Remote.

Mounting Your Remote

The Remote (or multiple Remotes) should be mounted so that it is sensing motion and/or illuminating within the field of view of the paired camera.

NOTE: If the illuminator is enabled on the Remote, it should be facing away from the camera to avoid "blinding" the camera while it is taking night-time images.

When the Remote senses motion it will send a signal to the camera to take a picture whether or not the subject that triggered the Remote is in the field of view of the camera.

The maximum range between the Remote and Camera is 100ft. However, it is generally advantageous to place the camera as close to the subject as possible to get higher quality photos.

Mounting Remote with Adjustable Bungee Cord (included)
The Remote may be mounted using the included adjustable bungee cord (pictured) or to a RECONYX™ VersaMount™, ThunderBolt™, or camera tripod by utilizing the threaded insert on the back of the Remote housing.

If you are concerned about someone seeing the Remote during daylight hours, you can mount it a bit higher and angle it down a little more. Most people do not often look up and therefore are less likely to notice the device if it is mounted a few feet higher.

NOTE: It is highly recommended that you use a theft deterrent device such as a security box and/or a Master Python Lock™ to help secure your camera and Remote against possible theft when it is in the field.

TIP: You can purchase HyperFire™ compatible theft deterrent cables, locks and security enclosures at www.reconyx.com

Using your Remote as a Functional Decoy

The HyperFire™RTI350 Remote can be used as a functional decoy. The Remote can be mounted in a location so it will detect motion and illuminate the scene at night, while the camera is hidden in a different location with only the lens and light meter exposed *(see chart on page 12 regarding settings)*.

Since the RTI350 Remote has the appearance of a camera, the subject may know they were under surveillance but will think that they have found the camera; while the actual images are being stored on the hidden camera.

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WalkTest and System Verification

The WalkTest mode is simple to use, yet gives you a lot of information about your system. The WalkTest will allow you to verify the aim of the Remote unit's PIR (Motion Detector) triggering zones, as well as allow you to verify systems settings, communication, and functionality.

The WalkTest light is a red LED that is located to the right of the lens. It only blinks when the device is in WalkTest mode or while arming. (It does not illuminate at any other time).

TIP: If left in WalkTest mode, the Remote and Camera will automatically arm after 2 minutes with no motion events. This allows you to set up the Camera and Remote, verify aim, check system settings, communications, and functionality as a system, and then just walk away (knowing the entire system will arm itself 2 minutes later).

Using the "WalkTest" Mode

PIR MOTION DETECTOR COVERAGE AREA

Learning to use the WalkTest mode is critical to being as successful as possible with your RECONYX™RTI350™. The WalkTest mode allows you to precisely determine your remote's active motion detection zones – ensuring your device is aimed exactly where you want to capture activity.

1) Secure the Remote to a tree or other object aiming it toward where you want it to capture pictures.

2) Put Remote in "WalkTest" mode, and close the unit.

3) Walk in front of the Remote where you expect to capture pictures. Every time the red WalkTest light blinks it indicates that a motion event is taking place. If the WalkTest light does not blink where you expect it to, adjust the aim or location.

4) If possible, set up the Remote so that no large trees or objects are in the main field of view as it can adversely affect motion detection as well as night time illumination range.

> ***NOTE:*** All RECONYX™ Remotes and cameras will self-arm from the "WalkTest" mode after a two minute period during which it does not detect any motion events.
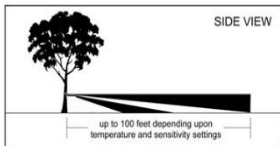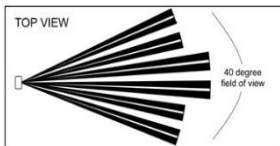
Remote WalkTest (Standalone) – To verify that the remote is aimed correctly and is sensing motion where you expect it to, by selecting "WalkTest" from the menu, and pressing "OK".

Walk in front of the remote where you expect it to sense motion. Just like with the camera, if you are using the Remote unit PIR (motion detector), the WalkTest light will blink once every time that motion is detected.

The WalkTest mode shows you exactly where the Remote's active motion detection zones are located. The tilt of the Remote is critical, as slight changes are magnified at greater distances.

If the WalkTest light does not blink where you expect to capture motion, you should adjust the aim of the remote and go through the WalkTest procedure again.

System WalkTest – When the Camera and Remote are both turned on, select "WalkTest" on both devices to verify that they are communicating correctly and to verify system settings.

1. Single Blink: signifies that the device (Remote or Camera) has detected motion.
2. Double Blink: signifies that the device (Remote and/or Camera) has received an "illuminator-on" command.

The table on the next page indicates what you should expect to see during System WalkTest depending upon the various system settings (these entries are illustrative, not exhaustive).

Unexpected Behavior During WalkTest

If you do not see the behavior you expect during WalkTest, check to be sure the devices are within range and that there is not an excessive amount of interference. You can check the amount of interference on the wireless frequency used by the Camera and Remote by selecting "Noise Scan" on the Remote.

NOTE: The maximum range of the system is 100ft (~30 meters), although this can be affected by placement height of the Remote and Camera (higher is better) as well as terrain, buildings, vegetation etc.

When Deploying Two Separate Systems in the same Vicinity (i.e. two Remote Enabled cameras and the associated Remote(s) within range of each other), be sure to select different channels for each set of devices that you want to communicate with each other. If too many devices are deployed in close proximity, you can get interference from the various devices and you may miss some communication packets even if the systems are set to different channels.

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System WalkTest: Scenarios and Expected Results

Table Legend:
Device Settings
On: ● Off: ✕

WalkTest Behavior
Single Blink (●) = Detects Motion
Double Blink (●●) = Illuminate
Single Blink followed by Double Blink (⁞)

	Remote			Camera					WalkTest Behavior	
	Trigger	Illuminator	Channel	Trigger	Illuminator	Channel	Transmit	Receive	Remote	Camera
Default Settings: Remote Triggered, both devices will Illuminate.	●	●	1	●	●	1	●	●	● ●●	●●
Default Settings: Camera Triggered, both devices will illuminate.	●	●	1	●	●	1	●	●	●●	● ●●
Remote Trigger & Illuminator used exclusively (Functional Decoy): When you want to hide the camera.	●	●	1	✕	✕	1	●	●	● ●●	
Using Remote as supplemental Illuminator only: Camera will Trigger and both devices will illuminate.	✕	●	1	●	●	1	●	✕	●●	● ●●
Using both Triggers, but only camera Illuminator. Remote triggered.	●	✕	1	●	●	1	✕	●	●	●●
Likely Error - Transmitter Off: Remote triggered but neither device will illuminate.	●	●	1	✕	✕	1	✕	●	●	
Likely Error - Channels mismatched: Remote Triggered -No communication.	●	●	1	●	●	2	●	●	●	

Additional Remote Options

IR Mask

If you need to clean the IR Array window, the IR Mask™ is easily removed by carefully inserting a small screw driver in the left or right side to pry it out.

Warning: Be very careful not to scratch the IR Array window!

To replace the IR Mask™, carefully line up one side of the IR Mask™ with the IR Array window. Then gently push on both sides until the IR Mask™ is completely seated against the window and snaps into both sides.

The windows covering the IR Array, lens, WalkTest indicator and light meter, may all be cleaned with glass cleaner or water using a soft non-abrasive cloth.

High Humidity Environments

We recommend using the moisture absorbing "desiccant system" available from RECONYX™. The desiccant system is designed to absorb moisture that may get trapped inside the Remote when the case is opened in humid conditions. It is not intended to absorb water if the Remote is opened in a rain storm, for instance.

The desiccant system can be used in any HyperFire™ device. Additional desiccant pellets are available for purchase at www.reconyx.com

Security Series Hardware Options

There are many custom hardware options available to suit your particular surveillance need (additional costs may be associated).

> *Some custom hardware options available from RECONYX include…*
> - *External Power Connectors*
> - *Telephoto Lens (2X) – Standard on the SM750*
> - *Camouflage Housing*

TIP: You can purchase HyperFire compatible products for use in camouflaging your camera or remote at www.reconyx.com. Products include a modified Cable Box for use in in an urban/suburban settings; or a fake rock to use in suburban/rural settings.

Troubleshooting

For answers to questions about your RECONYX™ HyperFire™ products that you cannot find in this *Instruction Manual*, please check the RECONYX™ web site (www.reconyx.com).

Limited Nighttime Range

If your nighttime range is less than expected, check to be sure your batteries are new or fully charged. You can also change your camera's night mode image setting to Max Range. If using Max Range doesn't resolve the problem, then try running either NiMH rechargeable batteries or Energizer 1.5V AA Ultimate Lithium batteries. Alkaline batteries cannot deliver enough amperage to power the illuminator consistently at night.

The physical Camera and Remote setup is also important in getting good night time images. If you aim the camera out over an open field where there is nothing within range to reflect the Infrared energy back toward the camera, the images will appear very dark (like shining a flashlight into outer space). The best night time images will be captured when you have a backdrop of some sort that will reflect energy back toward the camera (e.g. trees, tall grass, fence, building, hillside, etc).

False Triggers

If you seem to be getting false triggers, (i.e. the camera is taking pictures of nothing) first put your Camera and Remote back to the default settings and try again. This will ensure that you are running with known settings – with the motion detector ON at HIGH sensitivity and with Time-Lapse turned OFF.

If, after going back to default setting, you still seem to be getting false triggers, check the physical setup of your Camera and Remote. The sun should not be shining directly on the face of the Camera or Remote, and the field of view should be cleared of as much vegetation as possible. False triggers most often occur on sunny, breezy days. Vegetation will soak up the sun's energy and it will become warmer than the ambient air temperature. Then, when the wind moves the vegetation, the motion detector sees this and cannot distinguish it from a warm-blooded person or vehicle moving in the scene. Careful planning, placement and setup of your Camera and Remote will help to prevent false triggers.

Only as a LAST resort should you turn down your Remote or camera's motion sensitivity. This reduces your ability to detect movement of people, especially during the summer.

Remote PIR (Motion Detector) Not Triggering

First put the Remote back to Default settings and try again. This will ensure that you are running with known settings. Also check the PIR (motion detector) sensitivity; it should be set at HIGH sensitivity. This is important, especially in the warmer months, because as the background temperature approaches the temperature of the subject of interest, the strength of the signal decreases and the range goes down accordingly.

If you are still having trouble, please refer to the *"Mounting and Aiming"* section in your camera's instruction manual for detailed information, as well as using the WalkTest mode. There are inactive zones that you need to be aware of so that you don't aim the inactive zone precisely where you want to detect motion. The RTI350 sensor zones are the same as the camera.

It is important to keep in mind that there are other factors that can also affect the ability of your device to detect motion. Wind can have a detrimental effect. Body heat can be quickly dispersed on a breezy day, making it more difficult to detect the subject. Also movement directly toward and away from the device is less likely to trigger the device than side-to-side movement. And, finally, if a subject is moving very slowly, it will sometimes not produce a strong enough signal within the sensor to trigger the device.

Cold Weather Problems

If your Remote or Camera shuts down in the cold, it may be too cold for the batteries. Refer to "Battery Specifications" for recommended battery types.

Extreme cold weather may have an adverse effect on the LCD display; this does not inhibit the Remote or Camera's ability to function.

Battery Life Less than Expected

NiMH batteries have decreased life in hot weather. They will run the device, but they will have decreased run time. It is not unusual to see battery life drop off 50% or more when daytime temperatures are near 90° Fahrenheit or higher. This will not damage your NiMH batteries; their charge just runs down faster.

If you notice that when your batteries run down the night time illumination decreases, you should change your batteries sooner and be sure to use fresh Lithium or fully charged NiMH batteries.

Other Questions?
If you have read this manual and checked our web site, and you still need assistance, please contact our Technical Support Department at 866-493-6064 or through our website at www.reconyx.com.

Warranty, FCC, and Safety Information

RECONYX™ Limited Hardware Warranty

- The RTI350 has a **one (1) year warranty**.

If during this period, through normal use, a hardware product becomes defective due to defects in materials or workmanship, RECONYX™ will either repair or replace the product. This warranty is void if a product failure results from accident, abuse, improper use by Buyer, disassembly, or unauthorized maintenance and repair.

> *NOTE*: **There is a warranty seal on your Remote; if this seal is broken or tampered with, the warranty is void.**

Repair or Replacement

Buyer must obtain a Return Authorization (RA) number from RECONYX™ before returning any product(s) for repair or replacement. If RECONYX™ concludes that a returned product is not defective, Buyer will be notified, the product will be returned to Buyer at Buyer's expense, and Buyer may be charged for examination and testing of the product.

This limited warranty is the sole warranty for hardware and software products offered by RECONYX™ and RECONYX™ shall not be liable for any amounts for said products except in compliance with this warranty.

FCC Warning

Changes or modifications not expressly approved by Reconyx, Inc. could void the user's authority to operate the equipment.

> *NOTE*: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
> - Reorient or relocate the receiving antenna.
> - Increase the separation between the equipment and receiver.
> - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
> - Consult the dealer or an experienced radio/TV technician for help.

Preventing Malfunction

Avoid Strong Magnetic Fields

Never place the Remote or Camera in close proximity to electric motors or other equipment generating strong electromagnetic fields. Exposure to strong magnetic fields may cause malfunctions or corrupt image data.

Avoid Condensation

Moving the Remote or Camera rapidly between hot and cold temperatures may cause condensation (water droplets) to form on its external and internal surfaces. You can avoid this by placing the device in an airtight, plastic bag and letting it adjust to temperature changes slowly before removing it from the bag.

If Condensation Forms Inside the device

If you detect condensation inside the Remote or Camera you should stop using it immediately. Continued use may damage the electronics. Remove the batteries and/or memory card from the device and wait until the moisture evaporates completely before resuming use.

Warnings

- Store this equipment out of the reach of children and infants.
- Do not allow water or other liquids to enter the interior of the device. The interior has not been waterproofed. If the exterior comes into contact with liquids or salt air, wipe it dry with a soft, absorbent cloth. In the event that water or other foreign substances enter the interior, immediately turn the power off and remove the batteries.
- Use of power sources not expressly recommended for this equipment may lead to overheating, fire, electrical shock, or other hazards.
- Do not short-circuit the battery terminals with metallic objects, such as key holders. It could lead to overheating, burns, and other injuries.
- Avoid using, placing, or storing the equipment in places subject to strong sunlight or high temperatures, such as the dashboard or trunk (boot) of a car. Exposure to intense sunlight and heat may cause the batteries to leak, overheat or explode, resulting in fire, burns or other injuries. High temperatures may also cause deformation of the casing.
- When using desiccant, the following precautions should be followed: Keep desiccant out of reach of children. Desiccant may cause eye or skin irritation; seek medical assistance for further treatment,
- Check your state/local laws concerning the use of this product.

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Your Information and Warranty Registration

Record Your Information
After you have familiarized yourself with this instruction manual, your remote, and software, you should record some basic information here so that you don't lose it. It is also a good idea to keep your purchase receipt in case you would need warranty work done on your remote.

Date Purchased:	
Place of Purchase:	
Model:	
Serial #:	
CodeLoc™ Password:	___ ___ ___ ___
www.reconyx.com Username:	
www.reconyx.com Password:	

Register your Remote
Save A Stamp! Register your RECONYX™ camera and remote online today at **www.reconyx.com/register** or by sending in the information below to:

RECONYX, Inc.
3828 Creekside Lane
Holmen, WI 54636

RECONYX™ HyperFire™ Warranty Registration

Name:		
Address:		
City:	**State:**	**Zip:**
Phone:	**Email:**	
Model:		
Serial Number:		
Date Purchased:		
Retailer:		

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- Python Locks™ are a product of Master Lock

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